

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

**AIR QUALITY PERMIT
Issued under 401 KAR 52:040**

Permittee Name: Daicel Safety Technologies America, (INC)

Mailing Address: 1382 Old Liberty Church Road
Beaver Dam, KY 42320

Source Name: Daicel Safety Technologies America, (INC)
Mailing Address: 1382 Old Liberty Church Road
Beaver Dam, KY 42320

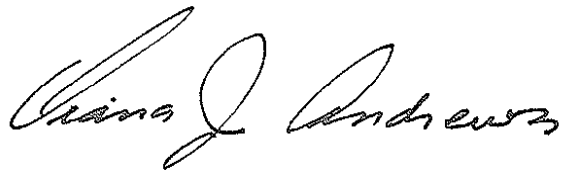
Source Location: 1382 Old Liberty Church Road
Beaver Dam, KY 42320

Permit Number: S-06-109 (R1)
Source A. I. #: 6238
Activity #: APE20070001
Review Type: State Origin
Source ID #: 21-183-00101

Regional Office: Owensboro Regional Office
3032 Alvey Park Drive W., Suite 700
Owensboro, KY 42303-2191

County: Ohio

Application
Complete Date: January 11, 2008
Issuance Date: July 20, 2006
Revision Date: January 18, 2008
Expiration Date: July 20, 2016



**John S. Lyons, Director
Division for Air Quality**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**01 (01) *Grinding for Propellant Manufacturing***

Description: Baldor Electric Equip BU946606
213 lb/hr throughput capacity
Construction commenced – November, 2005
Control equipment: None

04 (04) *Fuel Weighing for Propellant Manufacturing*

Description: Saratorious YACO1FC-X
220 lb/hr throughput capacity
Construction commenced – November, 2005
Control equipment: None

05 (05) *Kneader for Propellant Manufacturing*

Description: Paramax PHD9070P4-LR-90
220 lbs/hr throughput capacity
Construction commenced – November, 2005
Control equipment: None

06 (06) *Wet Extruder for Propellant Manufacturing*

Description: 6Marushichi N1401-1/123
220 lb/hr throughput capacity
Construction commenced – November, 2005
Control equipment: None

07 (07) *Packaging for Propellant Manufacturing*

Description: Air Systems Components TB122
220 lb/hr throughput capacity
Construction commenced – November, 2005
Control equipment: None

10 (10) *Kneader for Propellant Manufacturing*

Description: Paramax PHD9070P4-LR-90
220 lbs/hr throughput capacity
Construction Commenced - Proposed
Control equipment: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**11 (11) Wet Extruder for Propellant Manufacturing**

Description: 6Marushichi N1401-1/123
220 lb/hr throughput capacity
Construction Commenced - Proposed
Control equipment: None

APPLICABLE REGULATION:

401 KAR 59:010, *New process operations*, applies to emission points constructed on or after July 2, 1975

1. Operating Limitations: N/A**2. Emission Limitations:**

- a. Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 2.34 lbs/hr for each unit.
- b. Pursuant to 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed twenty (20) percent for each unit.

Compliance Demonstration Method:

- a. Compliance with the PM limits is demonstrated based on the following parameters:

Emission Point	Description	Maximum Operating Rate (tons/hr)	Emission Factor (lb/ton)	Maximum Emissions (lb/hr)
01	Grinder	0.107	0.27	0.03
04	Fuel weighing	0.11	0.975	0.11
05	Kneader	0.11	0.68	0.07
06	Wet Extruder	0.11	0.05	0.01
07	Packaging	0.11	4.55	0.50
10	Kneader #2	0.11	0.68	0.07
11	Wet Extruder #2	0.11	0.05	0.01

- b. For compliance with the visible emission limitation, refer to 4. Monitoring Requirements and 5. Recordkeeping Requirements.

3. Testing Requirements: N/A**4. Monitoring Requirements:**

In order to demonstrate compliance with 401 KAR 59:010, the permittee shall perform weekly visual observations on each emission point when it is in operation. If emissions are observed, an EPA Method 9 test shall be performed.

5. Recordkeeping Requirements:

In order to demonstrate compliance with 401 KAR 59:010, Section 3(1), a record of weekly visual observations and any EPA Method 9 test performed shall be maintained.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

6. **Reporting Requirements:** N/A

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**02 (02) *Oxidizer for Propellant Manufacturing***

Description: 319.5 lb/hr throughput capacity
Construction commenced – November, 2005
PM emission control - AAF AR-20 Cartridge Fabric Filter (DC-2)
Control Efficiency - 99.0%

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*, applies to emission points constructed on or after July 2, 1975

1. Operating Limitations: N/A**2. Emission Limitations:**

- a. Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 2.34 lbs/hr.
- b. Pursuant to 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed twenty (20) percent.

Compliance Demonstration Method:

- a. Compliance with the PM limits is demonstrated based on the maximum throughput of 0.15975 ton/hr, an emission factor of 22.23 lbs/ton and a PM control efficiency of 99.0%, resulting in maximum hourly PM emissions of 0.036 lb/hr.
- b. For compliance with the visible emission limitation, refer to 4. Monitoring Requirements and 5. Recordkeeping Requirements.

3. Testing Requirements: N/A**4. Monitoring Requirements:**

In order to demonstrate compliance with 401 KAR 59:010, Section (1), the permittee shall perform weekly visual observations when Emission Point 02 is in operation. If emissions are observed, an EPA Method 9 test shall be performed.

5. Recordkeeping Requirements:

- a. In order to demonstrate compliance with 401 KAR 59:010, fabric filter DC-2 shall be inspected on an annual basis and the records of conditions of the following shall be maintained:
 - i. Filters – replace as needed
 - ii. Gaskets and Seals
 - iii. Filter cleaning mechanism
 - iv. Differential pressure guage
- b. In order to demonstrate compliance with 401 KAR 59:010, Section 3(1), a record of weekly visual observations and any EPA Method 9 test performed shall be maintained.

6. Reporting Requirements: N/A

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 08 (08) Boiler #1
09 (09) Boiler #2
Primary fuel: Natural gas
Rated capacity: 10.461 mmBtu/hr, each
Construction commenced: November, 2005

APPLICABLE REGULATIONS:

401 KAR 59:015, New Indirect Heat Exchangers (applicable to an emission unit with a capacity less than 250 MMBTU/hr and commenced on or after April 9, 1972).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity of 29 MW (100 mmBtu/hr) or less and 2.9 MW (10 mmBtu/hr) or greater which commenced construction, modification, or reconstruction after June 9, 1989.

1. **Operating Limitations:** None
2. **Emission Limitations:**
 - a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions from each emission point shall not exceed 0.46 lb/mmBtu.
 - b. Pursuant to 401 KAR 59:015, Section 5(1)(c), sulfur dioxide emissions from each emission point shall not exceed 2.10 lb/mmBtu.
 - c. Pursuant to 401 KAR 59:015, Section 4(2), the opacity of visible emissions from each emission point shall not exceed twenty (20) percent.

Compliance Demonstration Method:

These units are considered to be in compliance with the allowable PM, opacity, and SO₂ limitations while burning natural gas.

3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:**
 - a. The permittee shall record and maintain records of the amount of natural gas combusted during each day for each unit in accordance with Regulation 40 CFR 60, Subpart Dc.
 - b. Refer to Section C.B regarding retention time of records.
6. **Specific Reporting Requirements:** None

SECTION C - GENERAL CONDITIONS**1. Administrative Requirements**

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
- c. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [Material incorporated by reference by 401 KAR 52:040, Section 1a, 11]
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition. [Material incorporated by reference by 401 KAR 52:040, Section 1a, 4,5]
- e. This permit does not convey property rights or exclusive privileges.[Material incorporated by reference by 401 KAR 52:040, Section 1a, 8].
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].
- g. This permit shall be subject to suspension at any time the permittee fails to pay all fees within 90 days after notification as specified in 401 KAR 50:038, Air emissions fee. The permittee shall submit an annual emissions certification pursuant to 401 KAR 52:040, Section 20.
- h. All previously issued permits to this source at this location are hereby null and void.

2. Recordkeeping Requirements

- a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f) and Section

SECTION C - GENERAL CONDITIONS (CONTINUED)

1b-IV-2 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].

- b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

3. Reporting Requirements

- a. (1) In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- (2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition a.(1) above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report [Section 1b-V-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation. The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

SECTION C - GENERAL CONDITIONS (CONTINUED)**4. Inspections**

In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

5. Emergencies/Enforcement Provisions

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement [401 KAR 52:040, Section 22(1)].
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)].

SECTION C - GENERAL CONDITIONS (CONTINUED)**6. Compliance**

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
- (1) Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
 - (2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear to be abnormal, the permittee must then comply with the requirements of Section C – General Conditions, 3.a.(2), of this permit.
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
- (1) Identification of the term or condition;
 - (2) Compliance status of each term or condition of the permit;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The method used for determining the compliance status for the source, currently and over the reporting period, and
 - (5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - (6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality	Division for Air Quality
Owensboro Regional Office	Central Files
3032 Alvey Park Drive W., Suite 700	803 Schenkel Lane
Owensboro, KY 42303-2191	Frankfort, KY 40601-1403
- c. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
- (1) Applicable requirements that are included and specifically identified in this permit; or

SECTION C - GENERAL CONDITIONS (CONTINUED)

- (2) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

7. Construction Requirements:

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission points 10 and 11 (Kneader #2 and Wet Extruder #2) in accordance with the terms and conditions of this permit.

- a. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issuance of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the Cabinet may extend these time periods if the source shows good cause.
- b. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:
 - (1) Date when construction commenced.
 - (2) Start-up date of each of the affected facilities listed on this permit.
 - (3) Date when maximum production rate was achieved.
- c.
 - (1) Pursuant to 401 KAR 59:005, General provisions, Section 2(1), this permit shall allow time for the initial start-up, operation and *compliance demonstration* of the affected facilities listed herein. However, within 60 days after achieving the maximum production rate at which the affected facilities will be operated, but not later than 180 days after initial start-up of such facilities, the owner or operator shall *demonstrate compliance to a duly authorized representative of the Division*.
 - (2) Pursuant to 401 KAR 59:005, General provisions, Section 3(1)(b), unless notification and justification to the contrary are received by this Division, the date of achieving the maximum production rate at which the affected facilities will be operated shall be deemed to be 30 days after initial start-up.
- d. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.

SECTION D - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. Pellet burn cage	401 KAR 59:010
2. 2 EBM Welders	401 KAR 59:010
3. 2 MAG Welders	401 KAR 59:010
4. 17 Projection Welders	401 KAR 59:010
5. Propane Flame Initiated Component Disposal Unit #1 for Treatment of Inflators, enhancer cups, and initiators	401 KAR 59:010
6. Propane Flame Initiated Component Disposal Unit #2 for Treatment of Inflators, enhancer cups, and initiators	401 KAR 59:010

Operating Limitations:

1. Each propane flame Disposal Unit (Insignificant Activities #5 and #6) shall be thoroughly cleaned not less frequently than once every seven (7) days when in operation.
2. The pellet burn cage (Insignificant Activity #1) shall be thoroughly cleaned following each two times the unit is operated.
3. The propane burners for each propane flame Disposal Unit (Insignificant Activities #5 and #6) shall be maintained to provide proper air flow and combustion conditions so as to allow minimize particulate emissions.

Compliance Demonstration Method:

A log indicating the date and time of each operation of all Insignificant Activities #1, #2, and #5, as well as the date and time of each thorough cleaning of each unit shall be available for inspection at all reasonable times as defined in Section C, **4. Inspections.**